

EMERGENCY REGULATION

ESTABLISHING THE METHODOLOGY TO BE UTILIZED IN DETERMINING THE MONTHLY WATER BUDGET FOR THE COMPONENT OF THE MONTHLY WATER USER CHARGES KNOWN AS THE TREATED WATER QUANTITY CHARGE.

This regulation is established to

The purpose of these rules is to establish a methodology that shall be utilized to determine the monthly water budget for the treated water quantity charge.

As the City Manager's delegate, I determine that this rule shall become effective immediately to protect the public health, safety, and welfare because

Authority: Section 4-20-25(b), 11-1-3, and 11-1-44, B.R.C. 1981

Rules approved as to form and legality for immediate adoption by the City Attorney's office on Jan. 2, 2007 (Date), 2007 by [Signature], Asst City Attorney.

Three copies of Emergency rules filed with the city clerk and will become effective immediately on \_\_\_\_\_ (Date), 2007.

Rules approved by the City Manager or his/her delegate on Jan. 3 (Date), 2007 by Robert Williams (Manger/Delegate), Director of Public Works / Utilities Department, as the City Manager's delegate.

Date of publication of notice of thirty day (30) comment period in the Daily Camera \_\_\_\_\_.

Approved by the City Manager without change after considering public comment on \_\_\_\_\_ (Date), 2007.

\_\_\_\_\_  
City Manager/Delegate

Approved rules re-filed with the City Clerk and continued in effect on \_\_\_\_\_ (Date), 2007.

\*\*\*NOTICE TO THE PUBLIC\*\*\*

The City Manager of the City of Boulder proposes to adopt an emergency regulation

ESTABLISHING THE METHODOLOGY TO BE UTILIZED IN DETERMINING THE MONTHLY WATER BUDGET FOR THE COMPONENT OF THE MONTHLY WATER USER CHARGES KNOWN AS THE TREATED WATER QUANTITY CHARGE.

**Copies are available for public review at Central Records at the Municipal Building, 1777 Broadway 2nd floor.**

Effective January 1, 2007, the City Council adopted changes to the treated water quantity charge portion of the monthly water charges that are billed to consumers. See Section 4-20-25(b), B.R.C. 1981. These rules establish the methodology to be utilized in determining the monthly water budget component of the treated water quantity charge, and need to be effective immediately in order to be applied to all water bills beginning January 1, 2007.

The rules establish four customer classes: single family residential, multifamily residential, commercial and industrial, and irrigation. Within each of the classes, the rules establish a system for calculating the appropriate water budget to be applied to that class. Rates are calculated by applying the water budgets to the block rates set by City Council in 4-20-25(b), B.R.C. 1981.

Written comment should be directed to Ned Williams,  
Director, Utilities, Public Works, 303 441 3200  
City of Boulder, P.O. Box 791, Boulder, CO 80306,

The City Manager will consider comments for 30 days on whether to make this rule permanent.

RULE ESTABLISHING THE METHODOLOGY TO BE UTILIZED IN DETERMINING THE MONTHLY WATER BUDGET FOR THE COMPONENT OF THE MONTHLY WATER USER CHARGES KNOWN AS THE TREATED WATER QUANTITY CHARGE.

**1. Authority.**

These rules are issued pursuant to Section 11-1-3, "Rules and Regulations," B.R.C. 1981 to implement the provisions of Sections 11-1-44, "Water User Charges," and 4-20-25(b), "Monthly Water Service Charges – Treated Water Quantity Charges," B.R.C. 1981.

**2. Purpose and Applicability.**

The monthly water user charges set forth in Section 4-20-25, B.R.C. 1981, identify two components for the monthly charges that are billed to consumers. Section 4-20-25(a), B.R.C. 1981, sets forth the treated water monthly service charge which is a fixed amount based on the meter size. Section 4-20-25(b) sets forth the treated water quantity charges which vary depending on use. Beginning in January 2007, the treated water quantity charge portion of water bills will be calculated using a water budget block rate structure such that the price of water increases as more water is used, particularly when the amount of water used exceeds the customer's water budget. The increasing price is necessary not only to promote water conservation, but also is related to the additional marginal cost associated with water development and water conservation.

The purpose of these rules is to establish a methodology that shall be utilized to determine the monthly water budget for the treated water quantity charge. This rule establishes a system whereby the revenue produced will meet the treated water quantity charge portion of the revenue requirements for the water utility. This rule does not include or apply to the treated water monthly service charges set forth at Section 4-20-25(a), B.R.C. 1981.

It is also the purpose of these rules to establish a rate structure that will promote water conservation and the efficient use of water, support community goals, reflect the value of water, send a price signal to customers who waste water, and avoid the costs of new water development and expanded water treatment.

**3. Definitions and Abbreviations.**

"AMU" means average monthly use.

"ET" means evapotranspiration (also, see ET Rate).

"ET rate" means the amount of water (in inches) a lawn will use on any specific day through the natural processes of surface evaporation and plant transpiration (loss of water through the leaves). The historic monthly ET rate is specifically defined in the following chart:

Historic Monthly ET Rate		
Month	ET (inches)	Share of Annual Outdoor Allocation
January	0.00	0%
February	0.00	0%
March	0.40	1%
April	2.72	7%
May	5.10	14%
June	7.52	20%
July	7.60	20%
August	6.67	18%
September	4.43	12%
October	2.92	7%
November	0.32	1%
December	0.00	0%
<b>Total</b>	<b>37.68</b>	<b>100%</b>

“GPSF” means gallons per square foot.

“Household size” means four persons.

“Kgal” means thousand gallons.

“Irrigable area” means the area (in square feet) that a customer is required to maintain pursuant to Title 6 and Title 8, B.R.C. 1981, is not covered by a hard surface (such as a roof, driveway, patio or sidewalk) and that may require some outdoor watering. Right-of-way may be part of a customer’s irrigable area, but the present GIS system does not include city right-of-way. Customers may seek inclusion of right-of-way pursuant to paragraph 6 below.

“Monthly water budget: means the amount of water allocated to the water utility cutomers to meet their anticipated watering needs for the month. The monthly water budget shall be the indoor and/or outdoor allocation for each water utility customer. The allocation shall be based on reasonable and necessary indoor and/or outdoor use, water conservation, and other relevant factors associated with water use in the city.

#### **4. Block Rate Structure for Treated Water Quantity Charges.**

The block rate structure established in Section 4-20-25(b)(1), B.R.C. 1981, is utilized in conjunction with the monthly water budget in order to determine the bill for each customer on a monthly basis. The monthly water budget represents the amount of water allocated to a customer to meet the anticipated watering needs for the month. Customers are billed for the amount of

water they use each month, not for their budgeted amount of water. The amount billed per Kgal increases as customers use more water. (See table below.)

	Block Rate (per Kgal)	Rate (per Kgal)	Block Size (% of water budget)
<b>Block 1</b>	Each Block Rate will be as reflected in Section 4-20-25 (b)(1), B.R.C. 1981	$\frac{3}{4}$ Base Rate	0 – 60%
<b>Block 2</b>		Base Rate	61 – 100%
<b>Block 3</b>		2 x Base Rate	101 – 150%
<b>Block 4</b>		3 x Base Rate	151 – 200%
<b>Block 5</b>		5 x Base Rate	Greater than 200%

## 5. Customer Classes.

This rule establishes four different customer classes: single family residential, multifamily residential, commercial and industrial, and irrigation. The method used to calculate the water budget for each of these classes is described below. The bills for all customer classes utilize the water budget amount which is then applied to the block rates to determine the final bill.

### a. Single Family Residential

The single family residential customer budget shall consist of indoor and outdoor allocations for water. The indoor allocation for each customer with a household size of up to four people shall be set at 7,000 gallons per month. The outdoor allocation shall be based on customer-specific irrigable area as determined by the city's geographical information system (GIS). This system maps and calculates areas within defined property boundaries and hard surface boundaries. Total annual outdoor use shall be based on the following application rates:

- For the first 5,000 square feet of irrigable area: 15 gpsf
- For the next 9,000 square feet of irrigable area: 12 gpsf
- For irrigable area in excess of 14,000 square feet: 10 gpsf.

In order to reflect varying seasonal outdoor monthly watering requirements, the total annual allocation of water for irrigable area shall be distributed to each month based upon that month's annual outdoor allocation as described by the historic monthly ET rate.

### b. Multifamily Residential

The multifamily residential customer budget shall consist of indoor and outdoor allocations. The indoor allocation for each residential dwelling unit shall be set at 4,000 gallons per month. The outdoor allocation shall be based on customer-specific irrigable area as determined by the city's GIS and a total annual application rate of 15 gpsf. The budget will

change each month based on its share of annual outdoor allocation as depicted by the historic monthly ET rate.

#### **c. Commercial and Industrial**

Commercial and industrial customer budgets shall be based on 100% of historical AMU for the 12-month period in 2005. This AMU amount will be fixed as the monthly budget until another AMU period is defined.

#### **d. Irrigation**

Metered irrigation customer budgets shall be based on customer-specific irrigable area as determined by the city's GIS, and an annual application rate of 15 gpf. The budget shall change each month based upon that month's share of annual outdoor allocation described by the historic ET rates, except that metered irrigation accounts will be given an additional 1% of their annual outdoor watering budget for each month in December, January and February. The purpose of this additional 1% is to establish a monthly water budget that is greater than zero and allows for some limited outdoor watering.

### **6. Water Budget Adjustments**

Water budget adjustments may be granted by the city manager to insure that the needs of the water utility customer are reasonably balanced against the purposes for this rule in paragraph 2 above. The city manager may consider the following:

- Number of people in household (more than four people) (single family accounts only)
- Irrigable area square footage (landscaping area)
- Irrigable area of public right-of-way the utility customer is required to care for and maintain
- Number of dwelling units (multifamily accounts only)
- Average monthly use (commercial and industrial accounts only)
- Licensed childcare facility
- Other (medical needs, etc.).

Customers shall submit a Water Budget Adjustment Application in order to have their request considered by the city manager. Information contained on the Application may be subject to an audit and, if necessary, additional documentation may be required in order to substantiate the requested adjustment. This information is outlined on the Water Budget Adjustment Application.

When reviewing the Water Budget Adjustment Application, the city manager may consider the following information:

- Completeness of required documentation submitted with the Application
- Authenticity of supporting documents

- Duration of household size or medical need
- Historic water usage information for property
- Correct errors or changed circumstances
- Other factors relevant to making a determination, provided that the needs of the water utility customer are balanced against the purposes for this rule in paragraph 2 above.

Water budgets will not be adjusted to accommodate:

- Pools, spas, or hot tubs
- Gardens (Gardens are included in the initial calculation of irrigable area and will not be the basis for additional water budget adjustments).

## **7. Water Budget Calculation Example – Single Family Residential.**

The single family residential water budget is the sum of an indoor and outdoor allocation. The indoor allocation is 7,000 gallons per month.

The outdoor allocation is based on customer-specific irrigable area as provided by the city's geographical information system. This allocation changes monthly based on seasonal watering needs. The annual outdoor allocation is calculated as follows:

- The first 5,000 square feet of irrigable area is allocated 15 gallons of water per square foot (gpsf)
- The next 9,000 square feet of irrigable area is allocated 12 gpsf
- All excess irrigable area gets 10 gpsf.

A customer with 14,400 square feet of irrigable area would have the following annual outdoor allocation:

<b>Irrigable Area (square feet)</b>	<b>Gallons per Square Foot</b>	<b>Total Gallons</b>
5,000	15	75,000
9,000	12	108,000
400	10	4,000
<b>Annual Outdoor Allocation</b>		<b>187,000</b>

The annual outdoor allocation is distributed throughout the year to meet changing monthly seasonal outdoor watering needs. The table below shows the percentages by month that will be applied to the annual outdoor allocation. These percentages were derived from historic ET data (as displayed in paragraph 3).

<b>Historic ET Rate</b>	
<b>Month</b>	<b>Share of Annual Outdoor Allocation</b>
January	0%
February	0%
March	1%
April	7%
May	14%
June	20%
July	20%
August	18%
September	12%
October	7%
November	1%
December	0%
<b>Total</b>	<b>100%</b>

A customer with an annual outdoor allocation of 187,000 gallons, would receive 20% (37,400 gallons) in June. This number will be rounded up to the nearest 1,000 gallon; therefore, this customer would receive 38,000 gallons in June.

In June, this customer's monthly water budget would be 45,000 gallons: the sum of their indoor allocation (7,000 gallons) plus their outdoor allocation (38,000 gallons) 45,000 gallons.

If this customer used 70,000 gallons in June (budget is 45,000 gallons), their water usage would be billed as follows:

<b>Rate Block</b>	<b>% of Budget</b>	<b>Gallons per Rate Block</b>	<b>Billed Water Usage (gallons)</b>
Block 1	0-60% of budget	0 – 27,000	27,000
Block 2	61-100% of budget	27,001 – 45,000	18,000
Block 3	101-150% of budget	45,001 – 68,000	23,000
Block 4	151-200% of budget	68,001 – 90,000	2,000
Block 5	over 201% of budget	Over 90,000	0

The customer's monthly bill uses the volume of water used in each Rate Block multiplied by the Block Rate (\$) per each billing block to determine the treated water quantity charge component of the monthly water bill.